

DRIVING TUNNEL UNDER HUDSON

Making Rapid Progress on Engineering Work.

BORING THROUGH THE MUD

Difficulties Sometimes Met in These Great Undertakings Beneath the Surface.

The rapid progress made in the construction of the tunnel under the Hudson River at New York is exciting the wonder and admiration of engineers.

The records of fast tunnel-driving have not only been broken, but left out of sight. And yet the chief feature of the work is its extreme simplicity—the ease with which a task formerly abandoned as all but impossible is being pushed ahead at so great a speed. Says "Engineering News" in an editorial: "Everyone has heard of the person who, for the purpose of escaping from the observation of his fellowmen, crawled into a hole and pulled the hole after him. That mythical feat is now equaled by the achievement of a well-known New York engineer who is driving a tunnel under the Hudson River and actually pushing the hole ahead of him."

"The work on the south tube for the Hudson River tunnel represents a method of tunnel-driving which, we risk little in saying, has never been carried on or attempted before in the world. That it is successful is attested by the rate at which the tunnel is being driven, which far exceeds all records of fast tunnel-driving ever made."

The Hydraulic Shield.
"What is being done is to push the hydraulic shield right into the soft mud, which is forced to either side and upward into the bed of the river. The tunnel is not thus being excavated at all, but it is actually bored in the same manner that an awl bores a hole in wood or leather. Of course, in driving a tunnel in this manner, nearly all the difficulties and dangers attendant upon submarine tunneling are eliminated. The workmen are protected by the iron-walled tunnel around them and the shield in front."

"So long as the shield can shove its way ahead without encountering boulders or other obstacle, necessitating the opening of bulkhead doors and work in front of the shield, the workmen are as safe as if they were in the open air. Moreover, when the shield is pushed forward in this manner, there is actually no tunneling work to be done. All the workmen have to do is to place ring after ring of the cast-iron lining as the shield moves ahead. Hydraulic power makes the hole that is ordinarily dug by pick and shovel and dynamite."

Softness of the Silt.
"It will be evident, of course, that this method of working is only made possible by the exceeding softness of the semi-fluid silt underlying the Hudson River, and through which the tunnel is being driven. This semi-fluid silt has defeated every engineer who has hitherto attempted to penetrate it by ordinary tunneling methods. De Witt Haskins spent years of time and a large slice of Trenor V. Park's fortune in driving 2,000 feet of the north tunnel and the enterprise was then abandoned by both engineers and capitalists.
"After lying idle for half a dozen years an English corporation undertook to complete it with the famous firm of S. Pearson & Son as the contractor, and the distinguished Sir Benjamin Baker as consulting engineer. But the million and a half of money which was raised proved insufficient to complete even the one river tunnel, and again the work was abandoned, and lay untouched for thirteen years."

Began in 1874.
"It was in November, 1874, that work on the Hudson River tunnel was begun, so that thirty years have now elapsed since Mr. Haskins first undertook the work. It had come to be universally regarded by engineers and contractors as the most difficult work ever attempted. And now comes forward Charles M. Jacobus, and, by simply putting on force enough to push his shield right through the soft silt, discovers that, instead of being the most difficult tunneling proposition ever undertaken, it is really the easiest, and he drives his south tunnel along at the astonishing rate of nearly fifty feet per day."

"It is doubtless true that the conditions under the Hudson River are extremely unusual. Probably in no other submarine tunnel ever attempted has the material penetrated been so soft enough to do with it what is being done now under the Hudson. There is, however, another piece of tunnel work in connection with the same enterprise which represents conditions only too common."

Under a Street.
"The engineer is often asked to drive a tunnel beneath a street surface by buildings, often of great value. If he judges by the records of past experience, he will probably advise that the probabilities are exceedingly strong that settlement of the building foundations will occur."

"In driving the Howard Street tunnel in Baltimore, for example, building after building along the line of the tunnel was injured or ruined. In Brooklyn, numerous cases of settlement have occurred along the streets where sewer tunnels have been driven; and other instances might easily be cited."

"But the approach to the north tube of the Hudson River tunnel is being built through a sewer, easily moved and loaded above by high brick buildings, and the work is being done with such care as to confine the excavated material to the exact section cut out by the shield, and so far the buildings above are intact. A more noteworthy achievement in soft-ground tunnel-driving it would be hard to find anywhere."

A COMPETENT TEACHER.
"How do you like your new school teacher?"
"Say, he's the best educated guy I ever seen."
"That's nice."
"You bet! Scruppy Joyce was going to be a teacher, but he put him out with a prettily left hook I ever seen!"—Houston Post

Peary Discusses Plans For Reaching the Pole

Explains Details of His Coming Trip to Arctic Region—The Prize and Reward Awaiting the Discoverer.

Commander Robert E. Peary, who has led four expeditions in quest of the North Pole, freely discussed his plans in a lecture in Brooklyn several evenings ago. Among other things he said: "I want the North Pole. 'What is that?' you ask. It is mathematically the point in which the axis of the earth cuts the earth's surface; where there is but one direction; one day and one night; where every wind that blows is a south wind. There is at the North Pole 90 degrees of latitude, no longitude and no time. There every heavenly body circles horizontally just beyond the horizon."

Geographers' Last Prize.
"The North Pole is the last geographical prize which this earth has to offer to man. Its value may not be directly financial, but let me tell you that there have already been \$100,000,000 worth of products taken from the Arctic region. The principal value, once the North Pole is discovered, is scientific and moral."
"The discovery of the pole will open up vast geographical and scientific features comprised in the enormous area of 3,000,000 square miles of territory in that great terra incognita. The most adventurous explorers of all the nations of the earth have long sought the pole. The country that finally wins it will secure a prize that can never be re-won and never be surpassed."

Difficulties in the Way.
"If the Stars and Stripes should be planted at the pole by an American, there is not a man, woman, or child in this country but would feel prouder of his land."

"The attainment of the pole would be to us an object lesson of what can be accomplished, in the face of the greatest odds, by persistence and indomitable courage. I have been at work on this project for twelve years now. The experience which I have gained during that time has put two very powerful factors in my hands."

"These are the results derived from my personal experiences in the Far North and the adaptation of the Eskimo tribe in polar explorations. Since my return home some two years ago I have been endeavoring in every way to get back."

"The Peary Arctic Club, incorporated under the laws of the State of New York, the object of which is to further polar exploration, has finally succeeded in securing funds for my next trip. I shall have the first Arctic ship ever built on this hemisphere."

"The ship is now under way. The contract for its construction has been signed. Money, however, must still be raised. We lack sufficient funds still for the equipment of the vessel. This is something that should interest every American, and I do not believe that, once they take thought upon it, they will withhold their financial support. Instead of a sailing vessel, she will be a powerful steamer, with auxiliary sail equipment."

To Start Next Year.
"Leaving New York on or about July 1 next, we will pass through Davis Strait, along the west coast of Greenland, through Baffin Bay to Cape Sabine, where we will hunt walrus so as to get a supply of food for the dogs, secure some Eskimo dogs, and establish a permanent base of supplies there. Here will be left the least able-bodied of our Eskimos. Upon our arrival at Cape Sabine we will be about 500 miles distant from the pole. From there we will travel north to the northern shore of Grant Land, which will bring us about 320 miles from the pole. I expect to reach there some time between September 1 and 15."

"The ship will be frozen in and she will remain until late in the following July or August. With what little light remains in the summer days I shall establish depots along the coast for provisions and the long nights of the winter. I shall remain with my ship, probably until February. With the first light of summer of 1905, I shall start north with some twenty or twenty-five sledges, each one hauled by a team of first class dogs, and with Eskimos, who are the pick and flower of the entire tribe, as drivers."

The New Vessel.
"Now for a few words about my ship. She need not be of pronounced power, but of such a shape that when squeezed between the huge flows of ice she shall rise under the pressure. The bow is to be of such a shape and stability as to enable her to smash her way through the ice. Once on the northern shore of Grant Land I will be within 420 miles of the pole."

"As a reason for thinking that a ship is the crucial part of my trip I will say that four times in four different seasons I have made sledge journeys, the air line distance of which almost equaled the distance from Grant Land to the pole, and if my ship could have reached Grant Land my sledge journey on one occasion would have carried me 100 miles beyond the pole and back again."

"There is, therefore, more than an even chance of my success this time. The salient points are a ship of such strength and power and shape as will land me and my party at the most northerly point of Grant Land, there to rest during the winter, and, again, fresh and eager in the spring, the use of a sufficient number of dogs and the utilization of the Eskimos."

Advantages of Route.
"The advantages of this route which I have just outlined are threefold. The ice from this point to the pole is more stable and less apt to be in motion than is the ice on the other side of the pole. This point brings me one hundred miles nearer to the pole, and I know that region for one hundred miles north of this point just as well as any of you know the streets of New York."
"One interesting part of the outfit of my ship will be a wireless telegraph equipment, the aid of which will place me in communication with my ship and the base of supplies at Cape Sabine, and by two or three relay stations, depending on the perfection of wireless telegraph up to next summer. I shall be able to communicate with the present permanent cable station at Cape Chateau, in northern Labrador, at the Straits of Belle Isle."

"If there is anything in wireless telegraphy my ship should be in constant communication with New York. Whether I shall take a light, portable apparatus on my sledge or not will depend upon circumstances. I may take it for a hundred miles, but the moment a pound of food becomes more important than a pound of apparatus it will be sacrificed."

Charm of the Arctic.
"There is one question which has been repeatedly asked, and that is, 'What is the charm of the Arctic regions?' and 'Why is it that a man who goes there, almost invariably goes there again?' First and foremost it is the appeal of a primeval world to the primeval man. There are very few of us who have not a drop of the cave dweller's blood in our veins. Also, in that region you realize that you are working for that goal for which the best of men before you have so long striven."

"Can you think what it means to live in those Arctic wastes and frosts? If so, you think of living a new life. Another question on which I am frequently asked is, 'How do you stand the intense cold?' I think I can correct a popular impression in regard to that. It is not the cold itself, but the darkness, the long nights that breed insanity in some temperaments."

Charm of the Arctic.
"There is one question which has been repeatedly asked, and that is, 'What is the charm of the Arctic regions?' and 'Why is it that a man who goes there, almost invariably goes there again?' First and foremost it is the appeal of a primeval world to the primeval man. There are very few of us who have not a drop of the cave dweller's blood in our veins. Also, in that region you realize that you are working for that goal for which the best of men before you have so long striven."

Charm of the Arctic.
"There is one question which has been repeatedly asked, and that is, 'What is the charm of the Arctic regions?' and 'Why is it that a man who goes there, almost invariably goes there again?' First and foremost it is the appeal of a primeval world to the primeval man. There are very few of us who have not a drop of the cave dweller's blood in our veins. Also, in that region you realize that you are working for that goal for which the best of men before you have so long striven."

Charm of the Arctic.
"There is one question which has been repeatedly asked, and that is, 'What is the charm of the Arctic regions?' and 'Why is it that a man who goes there, almost invariably goes there again?' First and foremost it is the appeal of a primeval world to the primeval man. There are very few of us who have not a drop of the cave dweller's blood in our veins. Also, in that region you realize that you are working for that goal for which the best of men before you have so long striven."

Charm of the Arctic.
"There is one question which has been repeatedly asked, and that is, 'What is the charm of the Arctic regions?' and 'Why is it that a man who goes there, almost invariably goes there again?' First and foremost it is the appeal of a primeval world to the primeval man. There are very few of us who have not a drop of the cave dweller's blood in our veins. Also, in that region you realize that you are working for that goal for which the best of men before you have so long striven."

KAISER NOW RUNS BRICKMAKING WORKS

His Subjects Complain of the Unfair Rivalry Which He Has Created.

BERLIN, Dec. 24.—There are loud complaints about the Kaiser's participation in industrial enterprises.

In addition to all his other interests, the Emperor is also proprietor of a brickmaking works at Cadinen, West Prussia. A new building of the Danzig branch of the German Imperial bank has been constructed of bricks from these works, and the greater part of the internal decorations in majolica wares has been supplied by a factory belonging to the Emperor.

Besides finding the materials, his majesty co-operated with the architects in completing the plans, particularly with regard to the ornamental features of the building.

The "Freisinnige Zeitung" discusses the monarch's participation in competitive industry, and points out that his brickmaking works and factories are exempt from both national and municipal taxation of all kinds. His majesty is, in consequence, in a position to under-price private competitors.

Other newspapers profess to regard royal participation in trade as inconsistent with Prussian traditions, and suggest that the Emperor should comply with the restriction imposed on all Prussian state officials, who are not allowed to concern themselves with trade.

AUTOMOBILE REGULATIONS MUST BE COMPLIED WITH

The Automobile Board has called the attention of Commissioner West to the fact that quite a number of automobiles have so far failed to comply with the regulation requiring the letters "D. C." to be placed on the panels bearing the numbers of the machines. The regulation will be enforced, according to the statement of Commissioner West, who wishes the fact to be called to the general attention of the public.

PHILIPPINES STAMP DESIGNS ARE READY

To Be Passed on by Secretary Taft. One Denomination Immortalizes Native Poet.

A great curiosity to philatelists is the series of stamps which this Government proposes to issue for use in the Philippine Islands.

Specimens of the first design made at the Bureau of Engraving and Printing were received at the Insular Bureau yesterday and were there subjected to a rigid inspection. It is probable that Secretary Taft will pass on them before they are accepted.

The most unique stamp is that corresponding to our 2-cent stamp. Instead of the picture of George Washington the face of a Filipino poet adorns it. This poet is named Jose Risalde. He wrote an idyll of the Philippines which attracted the attention of Secretary Taft. It was proposed to enshrine him as a national hero by giving him a place on Government paper.

The 4-cent stamp shows the familiar visage of Washington printed from the same cut as used on our 2-cent stamps. The 5-centavo stamp shows the new seal of the Philippine Islands; the 8-centavo stamp has a picture of the famous Mayon volcano of Luzon.

There are fourteen stamps in the series altogether, running from 2 centavos to \$5. At present this Government has no special design for Philippine stamps.

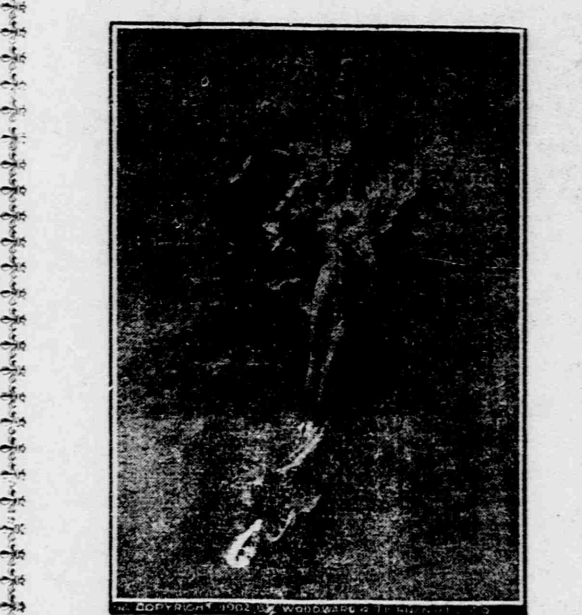
GETS GOLD HEADED CANE.
John W. Lyons was presented with a gold-headed cane by F. H. White last night in behalf of the stage hands of the Academy Theater, of which Mr. Lyons is manager.

Look for the Elk Head
—stamped on the wrapper of every pound of Elk Grove Creamery Pasteurized Butter; none genuine without it.

Serve Elk Grove Butter at Your Table



This Magnificent Art Calendar Free to All Consumers of Elk Grove Butter



We selected this calendar from hundreds of others that were submitted to us. It will be an ornament to your room. There is more, and they will arrive in a day or so. In the meantime save the Elk Grove Butter Cartons and be ready to get one. All the orders we have on the roll will receive prompt attention.

Our aim is and has always been to extend every courtesy to customers of Elk Grove Butter. That this fact is appreciated has been demonstrated again and again. They feel free to write to us when the occasion arises, and we give these communications careful attention. We have received a number of letters from people of small families who do not require a great deal of butter, requesting us to arrange so that they can get the handsome Art Calendar we are giving away. Our first decision was to place the number of cartons to be brought for a calendar at 15, and the demand for the calendars has been enormous, but we want every one to have one of these calendars—the small family as well as the large ones—therefore, we have decided to reduce the number of cartons to 5, so for 5 of the 1-lb. cartons in which Elk Grove Butter is put up you can have a Calendar. This Calendar is a beauty. It would cost you from seventy-five cents to one dollar at art stores. The subject is "FORTUNA." It was modeled by Alfred David Lenz, of New York City, the best and leading modeler of modern times, and a man who has perhaps done more to set the pace for a high standard of excellence in wax or clay modeling than any other in the country today. "FORTUNA" soars above the earth, and, like good fortune, seems almost out of reach. The star of Fortune in her brow, the winged wheel of Fortune at her feet, and the Cornucopia, or Horn of Plenty, in her outstretched hand, all symbolize fortune. The horn is overflowing with fruits of Nature for those who will reach high enough to attain them, and suggests the abundance of this present era of prosperity.

Save 5 of the 1-pound cartons or 10 1/2-pound cartons in which Elk Grove Butter is put up, then come to us and get a beautiful art calendar.

Owing to the enormous demand for the Art Calendar our supply has become exhausted. We have telegraphed for more, and they will arrive in a day or so. In the meantime save the Elk Grove Butter Cartons and be ready to get one. All the orders we have on the roll will receive prompt attention.

GOLDEN & CO., 922-28 Louisiana Ave. Wholesalers Only.

QUESTION OF SHOES FOR FILIPINO SCOUTS

Better Barefooted Than Shod as They Are, Says General Wood—Tropic Costume Not a New Controversy.

Gen. Leonard Wood's criticism of the kind of shoes issued to the scouts in the Philippines in his annual report, made public the other day, has aroused comment among army officers.

General Wood said that the shoes furnished the scouts are altogether inappropriate, since they "pinch and ruin the scout's feet, rendering him a clumsy and poor marcher."

In this connection army officers recall the controversy which General Wood stirred up not long ago over a new style marching shoe, which he advocated should be adopted for the general use of the army. General Wood took such an enthusiastic interest in the matter that he personally had a shoemaker prepare a design which was submitted to the quartermaster's department for inspection, and was finally exhibited to Mr. Root, then Secretary of War, to pass upon.

Secretary Root, after a long investigation of the entire shoe subject, concluded that General Wood's design would not do. It was thrown out on the ground that it was too elaborate and too expensive.

Since then the quartermaster's department, with the approval of the Secretary of War, has adopted a new style of shoe which is to be issued to the army as soon as the present supply is used up. This, it is said, will be in about a year.

The shoe which General Wood advocated was of russet calf with tops reaching about four inches above the

ankle, double-soled, and pegs on the soles. It is realized that General Wood could not have had this design in mind when he recommended a change, as the double soles are rarely used by the troops in the tropics.

The whole subject of equipping the soldiers in the Philippines and at Southern stations, has been a troublesome one to the War Department, inasmuch as only a limited amount of money is allowed for the preparation of new designs, and often it has been found that the patterns are not altogether satisfactory after the issue has been made.

General Wood, in discussing the equipment of the scouts, goes so far as to suggest even that they be allowed to go barefooted. This is against the prescribed military regulations.

Inasmuch as the value of these troops—probably most important in the Philippines—is, according to General Wood, practically destroyed, it is felt certain that there will be serious consideration of his project.

General Wood says at present the scout will "if left to himself, carry his shoes most of the time and only wear them in exceptionally rough and thorny country."

He recommends in his report that a lighter blanket be issued to the troops in the Philippines.

Times Want Ad Branch.

Want advertisements and subscriptions for The Evening and Sunday Times can be left at W. Armstrong's, corner of Seventh and H Streets northeast, at regular office rates.

SCULPTOR O'BRIEN ONCE RESIDED HERE

Some of the Work of Dead Artist Is Now in Washington.

John O'Brien, the famous sculptor, is dead at Galveston, Tex., at the age of seventy.

At the close of the civil war he came to Washington.

Among his works here are his life-sized figures of Justus Taney and Chase.

His Winchester soldier, on the battlefield in Virginia, is considered by many critics one of the best marble figures in the world.

Mr. O'Brien had a varied career. He was born in Ireland and at the age of fifteen enlisted for the Crimean war. After this he joined the Pope's army and during this service he studied sculpture.

After spending seven years in the principal schools of Rome he came to New York. One of his most noted works is the statue of Commodore Perry, which is on Euclid Avenue in Cleveland, Ohio.

He enlisted in the First Ohio at the beginning of the civil war, and followed the flag until the end. During his later years he did little work.

THE USEFUL CARPENTER.

During the inspection of the hospital corps of the Fourth Maryland Regiment recently, one of the members was asked his occupation.

"I am a carpenter," the man replied.

"Why, what can you do for the corps?" inquired the inspector, "as the hospital corps of a regiment is generally composed of pharmacists and medical students."

"I can make coffins," was the reply and it was eminently satisfactory.

Baltimore Sun.